

**REMARKS**

Claims 1-20 were presented for examination in the present application and remain pending upon entry of the instant amendment.

Claims 1 and 11 are independent.

Applicants hereby submit an Information Disclosure Statement (e.g., PTO-1449) including the previously submitted Japanese Utility Model No. JP58124801 in accordance with the requirements of 37 C.F.R. §§1.97 and 1.98. Consideration of this reference is respectfully requested.

Claims 1 and 11 were rejected under 35 U.S.C. §112, second paragraph as having insufficient antecedent basis for "the logic operations". Claims 1 and 11 have been amended to make explicit what had been implicit in the claims, specifically to positively recite "logic operations". Accordingly, reconsideration and withdrawal of the rejections are requested.

Independent claims 1 and 11, as well as dependent claims 2-3, 9, 12-13, and 19-20 were rejected under 35 U.S.C. §102 over U.S. Patent No. 3,979,256 to Keefe (Keefe).

Applicants respectfully traverse this rejection.

Independent claim 1 recites "converting said process signals to a single process signal for further system-based processing to carry out logic operations on a single-signal basis for identifying said event (emphasis added)".

Keefe discloses that outputs from neutron detectors 11, 13 are coupled to a failure detection circuit 15 and to a division circuit 17 (through amplifier circuits 14, 16). Failure detection circuit 15 acts to detect abnormal values of neutron flux in the reactor

and develop control signals in response to these abnormal values. The control signals from failure detection circuit 15 are coupled to, for example, control rod actuator 18. See col. 2, lines 20-30. Since the outputs from neutron detectors 11, 13 are coupled directly to failure detection circuit, Keefe discloses that the failure detection circuit 15 identifies an "event" based on both signals.

As such, Applicants submit that circuit 15 of Keefe clearly fails to disclose or suggest "converting said process signals to a single process signal for further system-based processing to carry out logic operations on a single-signal basis for identifying said event" as required by claim 1.

With respect to division circuit 17, Keefe discloses that the outputs from neutron detectors 11, 13 are coupled to division circuit 17, which develops an output signal proportional to the ratio of the signals from detectors 11, 13. The proportional signal from division circuit 17 is compared to reference signals in comparator 19 to develop an alarm signal when the ratio signal is outside of a given range. See col. 2, lines 50-60. Thus, Keefe discloses developing the alarm signal based on the comparison of two signals, namely the proportional signals to reference signals.

As such, Applicants also submit that circuit 17 of Keefe clearly fails to disclose or suggest "converting said process signals to a single process signal for further system-based processing to carry out logic operations on a single-signal basis for identifying said event" as required by claim 1.

In sum, neither circuit 15 nor circuit 17 of Keefe identify the event on a single signal basis as claimed. Further, Keefe clearly does not use logic circuit 20 to identify the alarm.

Accordingly, Applicants submit that Keefe fails to disclose or suggest claim 1, or claims 2-3 and 9 that depend therefrom. Reconsideration and withdrawal of the rejection to claims 1-3 and 9 are respectfully requested.

Independent claim 11 recites, in part, a single process signal that is “capable of being transmitted via one channel to carry out logic operations on a single-signal basis to identify said event (emphasis added)”.

As discussed in detail above with respect to claim 1, failure detection circuit 15 identifies an “event” based on two signals (e.g., outputs from neutron detectors 11, 13), while division circuit 17 develops the alarm signal based on the comparison of two signals (e.g., proportional signals and reference signals). In sum, neither circuit 15 nor circuit 17 of Keefe identify the event on a single signal basis as claimed. Further, Keefe clearly does not use logic circuit 20 to identify the alarm.

Accordingly, Applicants submit that Keefe fails to disclose or suggest claim 11, or claims 12-13, and 19-20 that depend therefrom. Reconsideration and withdrawal of the rejection to claims 11-13 and 19-20 are respectfully requested.

Independent claims 1 and 11, as well as dependent claims 4-5 and 14-15, were rejected under 35 U.S.C. §102 over U.S. Patent No. 6,356,821 to Yoshida (Yoshida). Dependent claims 6-8 and 16-18 were rejected under 35 U.S.C. §103 over Yoshida in view of U.S. Publication No. 2003/0115543 to Emde et al. (Emde). Dependent claim 10 was rejected under 35 U.S.C. §103 over Yoshida in view of U.S. Patent No. 4,794,601 to Kikuchi et al. (Kikuchi).

Applicants also respectfully traverse these rejections.

Independent claim 1 recites, in part, the step of “converting said process signals to a single process signal for further system-based processing to carry out logic operations on a single-signal basis for identifying said event”. Independent claim 11 recites, in part, a single process signal that is “capable of being transmitted via one channel to carry out logic operations on a single-signal basis to identify said event (emphasis added)”.

The Office Action asserts that Yoshida discloses that the output of comparing circuit 57 is a single fault signal which is inherently processed logically in order to determine if it is necessary to halt the processing system. See page 7, lines 1-5 of the Office Action dated July 3, 2007.

Applicants respectfully submit that the Office Action has misapplied Yoshida to claim 1. While the output of the comparing circuit 57 may be a single fault signal, Applicants submit that the comparing circuit 57 requires two inputs in order to determine if the fault condition exists. Specifically, Yoshida discloses that comparing circuit 57 compares operation results outputted from both microcomputers 51 and 52. See col. 1, lines 51-55.

Clearly, Yoshida does not carry out logic operations on a single-signal basis to identify the event. Rather, Yoshida compares two inputs to identify the fault condition

Emde was merely asserted as disclosing transmission of protected signals with respect to dependent claims 6-8. However, Emde simply fails to disclose or suggest the logic operations on a single-signal basis to identify the event of claim 1 or claim 11.

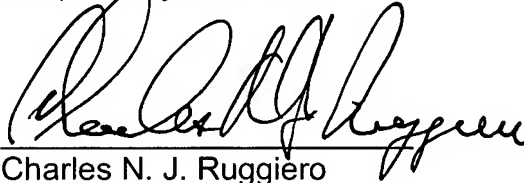
Kikuchi was merely asserted as disclosing transmission signals via separate channels with respect to dependent claim 10. However, Kikuchi simply fails to disclose or suggest the logic operations on a single-signal basis to identify the event of claim 1 or claim 11.

Accordingly, Applicants submit that Keefe, alone or in combination with Emde and/or Kikuchi fails to disclose or suggest independent claims 1 and 11, or claims 4-8, 10, and 14-18 that depend therefrom. Reconsideration and withdrawal of the rejection to claims 1, 4-8, 10-11, and 14-18 are respectfully requested.

In view of the above, it is respectfully submitted that the present application is in condition for allowance. Such action is solicited.

If for any reason the Examiner feels that consultation with Applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call the telephone number below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Charles N. J. Ruggiero", is written over a horizontal line.

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